Response After Final Under 37 C.F.R. 1.116
Applicant: John Ocel et al.
Serial No.: 10/056,807
Filed: January 25, 2002
Docket No.: M190.134.101
Title: FLUID-ASSISTED ELECTROSURGICAL INSTRUMENT WITH SHAPEABLE ELECTRODE

REMARKS

This Amendment is responsive to the Final Office Action mailed August 5, 2003. In that Office Action, claims 1-4, 7-11, 13-18, 24-31, and 33-43 were rejected under 35 U.S.C. §102(b) as being anticipated by Hovda et al., U.S. Patent No. 6,053,172 ("Hovda"). Claims 1-11, 13-16, and 24-32 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hovda in view of Panescu et al., U.S. Patent No. 5,688,267 ("Panescu"). Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Hovda in view of Moaddeb et al., U.S. Patent No. 6,405,078 ("Moaddeb"). Further, the Examiner's indication that the previously presented rejections under 35 U.S.C. §112, first paragraph, have been withdrawn is noted with appreciation. While the Office Action Summary recites that claims 1-43 have been rejected, it is respectfully noted that no itemized rejections are provided for claims 12 and 21-23. For the reasons provided below, Applicant respectfully submits that the pending claims are patentable over the cited references.

With respect to independent claims 1 and 24, the Examiner has maintained the rejection under 35 U.S.C. §102 in view of Hovda. As previously set forth in the Response to the Office Action mailed April 23, 2003, Applicant respectfully reiterates that Hovda does not teach or suggest at least an electrosurgical instrument including an elongated shaft adapted to be transitionable from a straight state to a first bent state and able to independently maintain distinct shapes in the straight and bent states. To summarize, Applicant's position is that Hovda only teaches (1) a flexible shaft or (2) a rigid shaft. With respect to the flexible configuration, Hovda requires an additional mechanism, such as pull wires, shape memory actuators, or other known mechanisms for effecting selective deflection (Hovda, column 11, lines 8-11; column 17, lines 53-59). In response to this argument, the Examiner has summarized column 17, lines 4-8 of Hovda as providing "the shaft (100) can be comprised of tungsten and/or nickel alloys and/or stainless steel alloys". The Examiner then states that "Nitinol is a tungsten/nickel alloy", such that according to the Examiner, the "materials" that constitute the Hovda shaft are equivalent to those that constitute the Applicant's shaft. From this, the Examiner concludes that Hovda "is at the very least capable of being transitionable from a straight state to a first bent state". Applicant respectfully disagrees for the following reasons.

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At the outset, it is respectfully noted that Nitinol is an alloy of nickel and titanium. Regardless, with respect to the language referenced by the Examiner, Hovda specifically states that the "shaft 100 comprises an electrically conducting material [singular not plural] usually metal, which is selected from the group comprising tungsten, stainless steel alloys, platinum or its alloys, titanium or its alloys, molybdenum or its alloys, and nickel or its alloys." (Emphasis and bracketed language added). Thus, Hovda is specifically limited to selecting only one of the materials set forth in the identified "group" as the shaft material. Hovda teaches that the shaft 100 can be tungsten or titanium or nickel, etc., but not a combination of the listed materials. Thus, Hovda does not teach or suggest Nitinol as otherwise advanced by the Examiner.

With respect to Hovda's listing of "stainless steel" as a possible shaft 100 material, it is respectfully asserted that taken in context, Hovda's reference to "stainless steel" does not result in the invention of claims 1 and 24. Stainless steel as used for the shaft 100 of Hovda could undoubtedly be provided in a non-malleable or rigid form. This is the conventional format for all stainless steel surgical instruments. In fact, this is exactly what Hovda contemplates. Pointedly, Hovda states that the shaft 100 is either rigid or flexible. Hovda uses the term "flexible" at several locations and with specific reference to a catheter system embodiment 400 (see, for example, column 26, lines 48-51). With this understanding of "flexible" in mind, Hovda's reference to "stainless steel" cannot be relative to a "flexible" configuration as stainless steel cannot be used as a catheter tube. Further, in the context of a non-catheter "flexible" embodiment of the shaft 100, Hovda, at column 17, lines 46-64, incorporates by reference the teachings of PCT Application Serial No. PCT/US94/05168 (published as PCT Publication No. 94/26228) to describe a bendable, flexible embodiment. This Publication, and in particular FIG. 18 thereof, provides that an internal pull wire or shape memory wire must be employed to achieve deflection of the outer tube. Thus, if Hovda is viewed as teaching stainless steel for a "flexible" shaft, the requirements of claims 1 and 24 are not satified as Hovda requires a mechanism apart from the outer tube itself.

The requirement that Hovda's rigid, stainless steel shaft embodiment is not malleable or otherwise adapted to provide for transition between a straight state and a bent state is further supported by Hovda's description of different rigid shafts (having different bend angles) for

different procedures. For example, Hovda describes a shaft having a 90° bend angle as being useful for accessing tissue located in the back portion of the mouth, whereas a shaft having a 10° – 30° bend angle is useful for accessing tissue near or in the front portion of the mouth or nose (column 18, lines 3-7). If the rigid, stainless steel shaft embodiment of Hovda were able to be manually bent and re-bent, and independently maintain the so-desired bent shapes, there would be no reason for Hovda to provide two different shafts with two different bend configurations. To the contrary, Hovda does not recognize, let alone teach, the benefits of the electrosurgical instrument of claims 1 and 24. As such, it is respectfully submitted that independent claims 1 and 24 are allowable over the cited references.

Claims 2-23 depend from claim 1. As previously described, claim 1 is not taught or otherwise suggested by the cited references. Therefore, claims 2-23 are similarly allowable. It is further noted that a specific rejection of claims 12 and 21-23 has not been submitted.

Claims 25-38 depend from claim 24. As previously described, claim 24 is not taught or otherwise suggested by the cited references. Therefore, claims 25-38 are similarly allowable.

Claim 39 was rejected as being anticipated by Hovda. As previously described, Hovda does not teach or suggest providing an electrosurgical instrument, the shaft of which is bendable from an initial straight state to a first bent state, with the shaft independently maintaining a shape of a first bent state. Further, assuming *arguendo* that the Examiner's proposition that Hovda is "at the very least *capable* of being transitionable from a straight state to a first bent state" is correct, Hovda does not teach performing these steps as part of an electrosurgical procedure. To the contrary, Hovda's teachings relative to the electrosurgical procedure utilizing the Hovda device are limited to using a rigid shaft that cannot and is not subjected to a bending step as part of the electrosurgical procedure; or the use of pull wires or similar mechanism to temporarily effectuate a bend in an otherwise flexible shaft, with the shaft in and of itself not maintaining the desired bent shape. If Hovda even considered the inventive method of claim 39, there would be no need for the pull wire or other extraneous mechanism. Thus, it is respectfully submitted that claim 39 recites allowable subject matter.

Claims 40-43 depend from claim 39. As previously described, claim 39 is not taught or otherwise suggested by the cited references. Therefore, claims 40-43 are similarly allowable. It

is further respectfully submitted that Hovda is void of any teachings relative to at least the steps of claims 41 and 42.

Allowable Subject Matter

In light of the above, Applicant believes independent claims 1, 24, and 39 and the claims depending therefrom, are in condition for allowance. Allowance of these claims is respectfully requested.

CONCLUSION

No fees are required under 37 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 500471.

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this response.

Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper or papers, as described herein, are being transmitted by facsimile to the Patent and Trademark Office, to the attention of **Examiner Peter J. Vrettakos**, at fax number (703) 746-7013 on this 6th day of October, 2003.

By
Name: Timothy A. Czaja